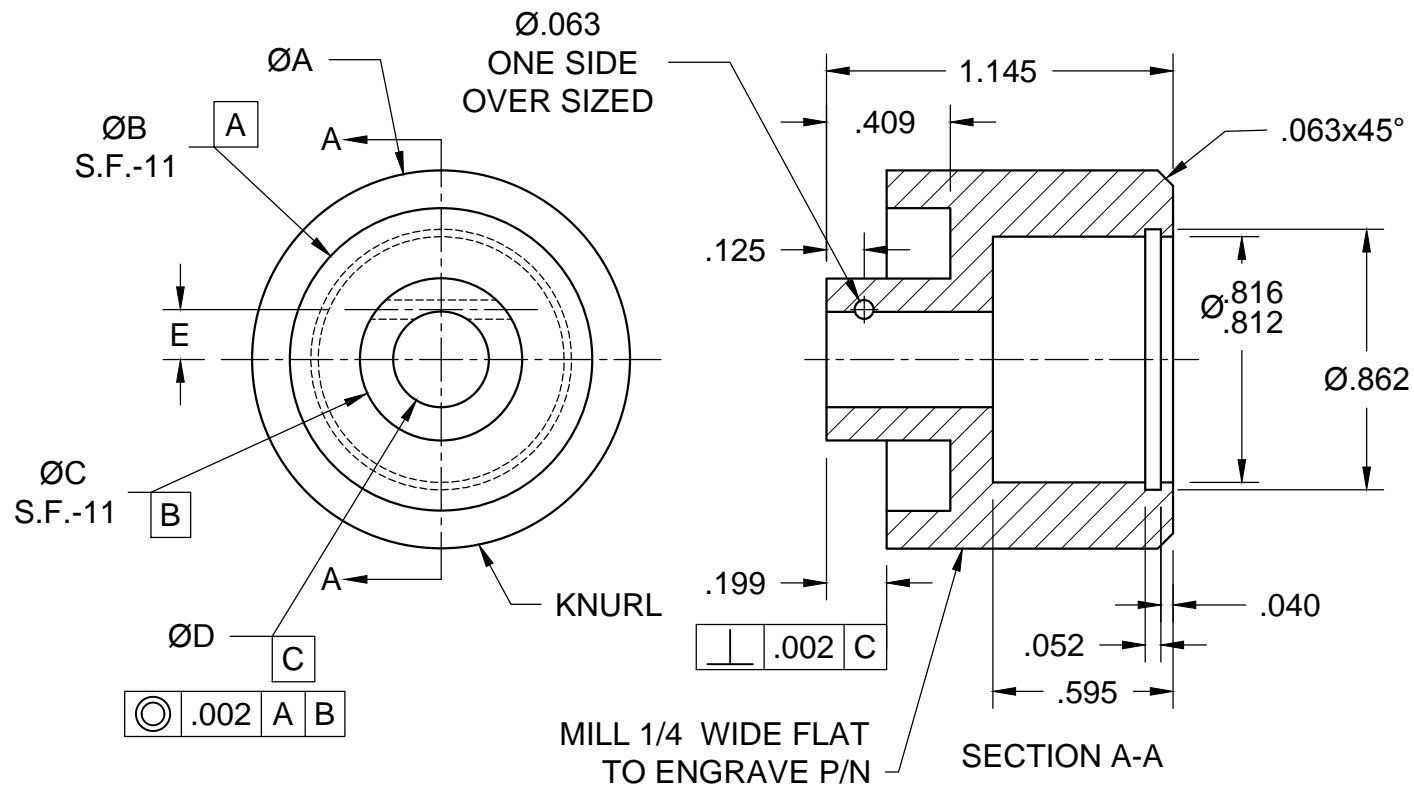



BEARING # BACB10	TOOL #	A	MATERIAL
FBO4-AMT	KSTFB04P	#10-24 UNC	4140 Q&T RND. BAR Ø7/8 x 7/8
FBO6	KSTFB06P	#1/4-20 UNC	4140 Q&T RND. BAR Ø7/8 x 7/8
FBO7	KSTFB07P	#1/4-20 UNC	4140 Q&T RND. BAR Ø7/8 x 7/8

<b>RED BARN MACHINE</b>			
TITLE KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS			
DWG NO. TOOL#(see chart)-15 TENSIONER			REV 2
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DRAWN BY: PERRITT	
TOLERANCES ON:		APPROVED	
DECIMALS		HEAT TREAT	
.XXX ± .005		FINISH	
.XX ± .01		SPEC BLACK OXIDE	
X ± .1		USED ON BEARING	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES 015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING		SEE CHART	
SCALE NTS	DATE 3-21-08	SHEET 9 of 9	

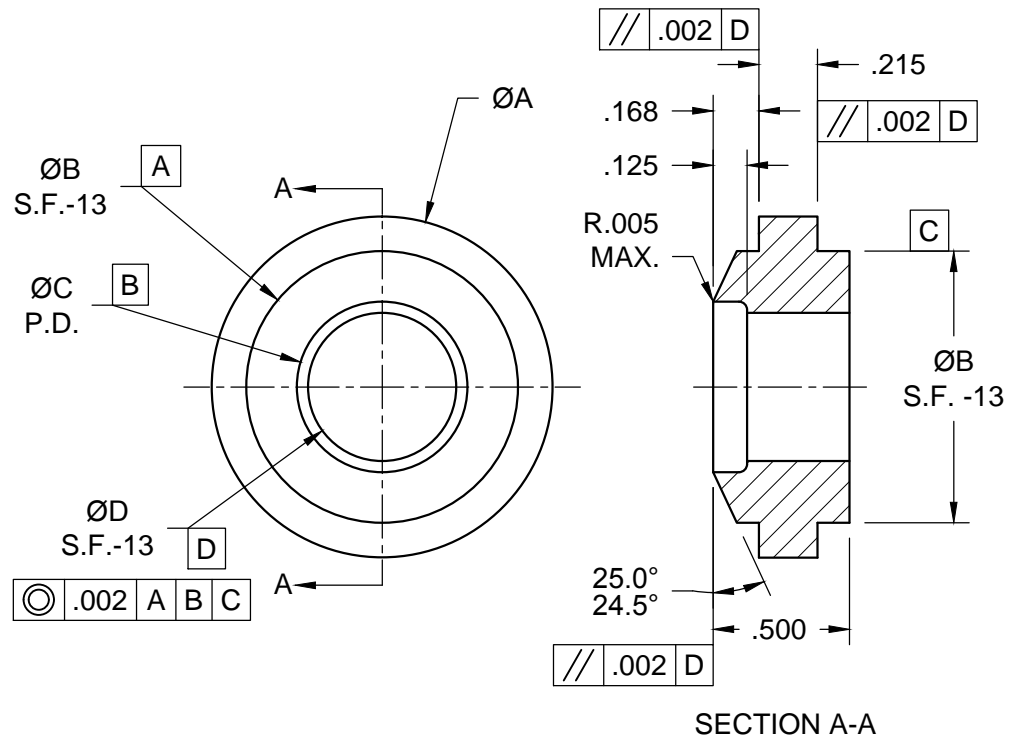
RECIEVER



BEARING # BACB10	TOOL #	ØA <small>+010 -010</small>	ØB <small>+005 -000</small>	ØC <small>+000 -003</small>	ØD <small>+002 -000</small>	E <small>+003 -003</small>	MATERIAL
FBO4-AMT	KSTFB04P	1.250	1.000	.536	.252	.136	4140 Q&T RND.BAR Ø1-1/4 x 1-1/4
FBO6	KSTFB06P	1.500	1.150	.689	.375	.195	4140 Q&T RND.BAR Ø1-1/2 x 1-1/4
FBO7	KSTFB07P	1.500	1.150	.689	.438	.226	4140 Q&T RND.BAR Ø1-1/2 x 1-1/4

 <b>RED BARN MACHINE</b>	
<b>TITLE</b> KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
<b>DWG NO.</b> TOOL#(see chart)-13 RECIEVER	<b>REV</b> 2
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES  TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1  FRACTIONS ± 1/32 ANGLES ± 5°	<b>DRAWN BY:</b> PERRITT APPROVED _____ HEAT TREAT _____ FINISH SPEC <b>BLACK OXIDE</b> USED ON BEARING _____ <b>SEE CHART</b>
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
<b>SCALE</b> NTS	<b>DATE</b> 3-2015
	<b>SHEET</b> 8 of 9

-11  
DUAL SEAT



BEARING # BACB10	TOOL #	ØA +.010 -.010	ØB +.000 -.003	ØC +.002 -.000	ØD +.003 -.000	MATERIAL
FBO4-AMT	KSTFB04P	1.250	.996	.617	.542	4140 Q&T RND. BAR Ø1-1/4 x 5/8
FBO6	KSTFB06P	1.500	1.146	.775	.690	4140 Q&T RND. BAR Ø1-1/2 x 5/8
FBO7	KSTFB07P	1.500	1.146	.900	.690	4140 Q&T RND. BAR Ø1-1/2 x 5/8

<b>RED BARN MACHINE</b>	
TITLE KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
DWG NO. TOOL#(see chart)-11 DUAL SEAT	REV 2
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1	DRAWN BY: PERRITT APPROVED HEAT TREAT FINISH SPEC BLACK OXIDE USED ON BEARING SEE CHART
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE NTS	DATE 3-21-08 SHEET 7 of 9

Ø.338  
Ø.330 UNLESS  
ØA IS LARGER

1/4-20 UNC

A

(-9)  
STUD

.250  
.247

B

ØA

C

R.032 MAX.

C

B

.438

.05

.900

.603

60°  
(x2)

⊙

.002

A

B

C

D (x2)

E

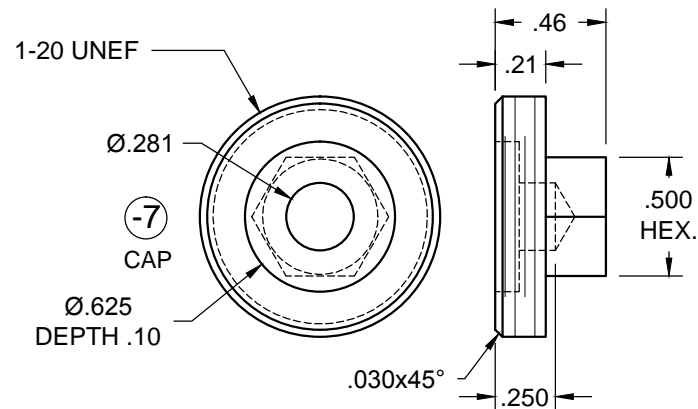
BEARING # BACB10	TOOL #	ØA +.000 -.002	B +.010 -.010	C +.010 -.010	D +.000 -.005	E	MATERIAL
FBO4-AMT	KSTFB04P	.248	1.040	2.600	.100	#10-24 UNC	4140 Q&T RND. BAR Ø3/8 x 2-7/8
FBO6	KSTFB06P	.373	1.082	2.600	.151	1/4-20 UNC	4140 Q&T RND. BAR Ø1/2 x 2-7/8
FBO7	KSTFB07P	.435	1.082	2.600	.188	1/4-20 UNC	4140 Q&T RND. BAR Ø1/2 x 2-7/8

RED BARN MACHINE

TITLE KSTFB##P SERIES PORTABLE TRI-ROLLER  
SWAGING TOOLS FOR BACB10FB BEARINGS

DWG NO. TOOL#(see chart)-9 STUD REV 2


UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DRAWN BY: PERRITT	
TOLERANCES ON:		APPROVED	
DECIMALS		HEAT	
.XXX ± .005	FRACTIONS ± 1/32	TREAT	
.XX ± .01	ANGLES ± 5°	FINISH	BLACK OXIDE
X ± .1		SPEC	
UNLESS OTHERWISE SPECIFIED		USED ON BEARING	
1. BREAK ALL SHARP EDGES			
.015 x 45° PR .015 R			
2. DIMENSIONAL LIMITS APPLY AFTER PLATING			
SCALE NTS	DATE 3-21-08	SHEET 6 of 9	

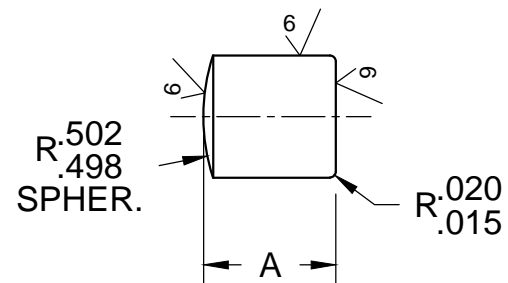
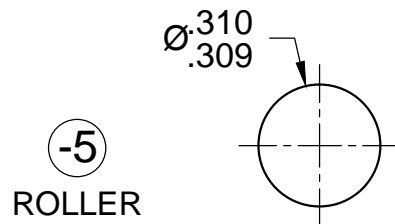


# NOTES


1. NOT USED WITH RIGHT ANGLE ATTACHMENT KSTRA101.

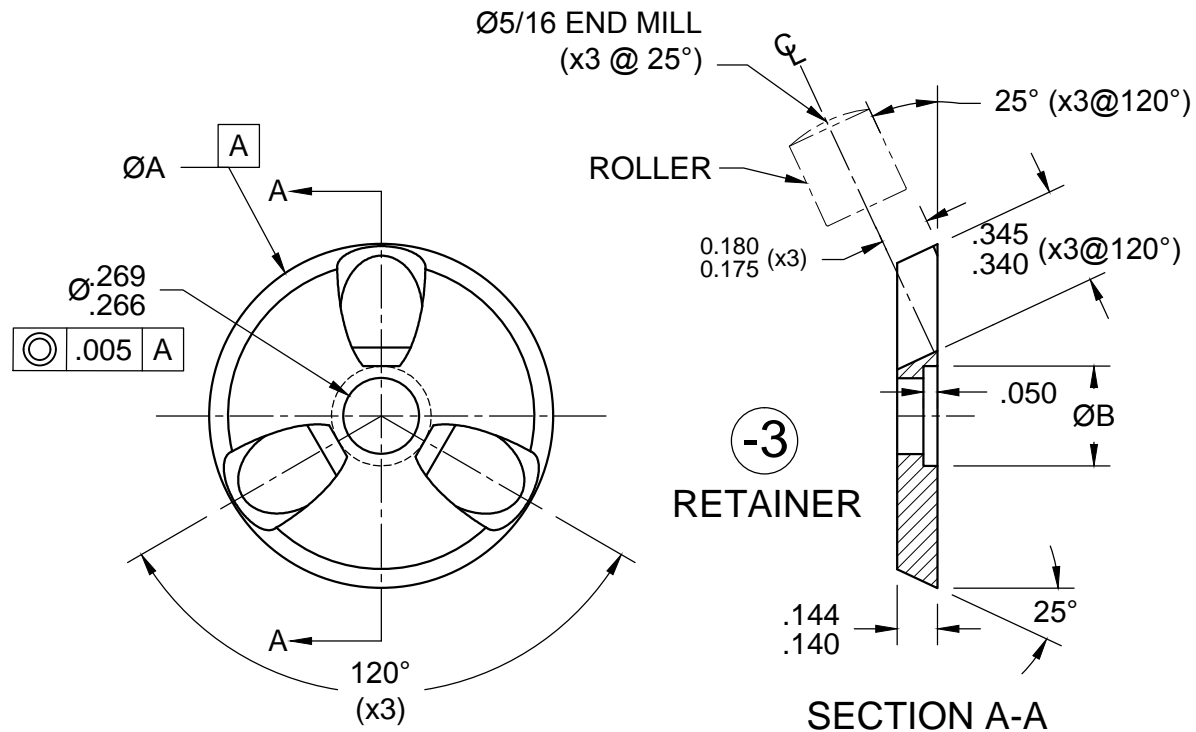
BEARING #	TOOL #	MATERIAL
BACB10		
FBO4-AMT	KSTFB04P	1018 RND. BAR Ø1 x 5/8
FBO6	KSTFB06P	1018 RND. BAR Ø1 x 5/8
FBO7	KSTFB07P	1018 RND. BAR Ø1 x 5/8

 <b>RED BARN MACHINE</b>	
<b>TITLE</b> KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
<b>DWG NO.</b> TOOL#(see chart)-7 CAP	<b>REV</b> 2
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
<b>TOLERANCES ON:</b> DECIMALS .XXX ± .005 FRACTIONS ± 1/32 .XX ± .01 ANGLES ± 5° X ± .1	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
<b>SCALE</b> NTS	<b>DATE</b> 3-21-08
<b>SHEET</b> 5 of 9	



BEARING # BACB10	TOOL #	A +.001 -.001	MATERIAL		
FBO4-AMT	KSTFB04P	.335	.310 MINUS	GAUGE PIN	MSC #89031009
FBO6	KSTFB06P	.335	.310 MINUS	GAUGE PIN	MSC #89031009
FBO7	KSTFB07P	.335	.310 MINUS	GAUGE PIN	MSC #89031009

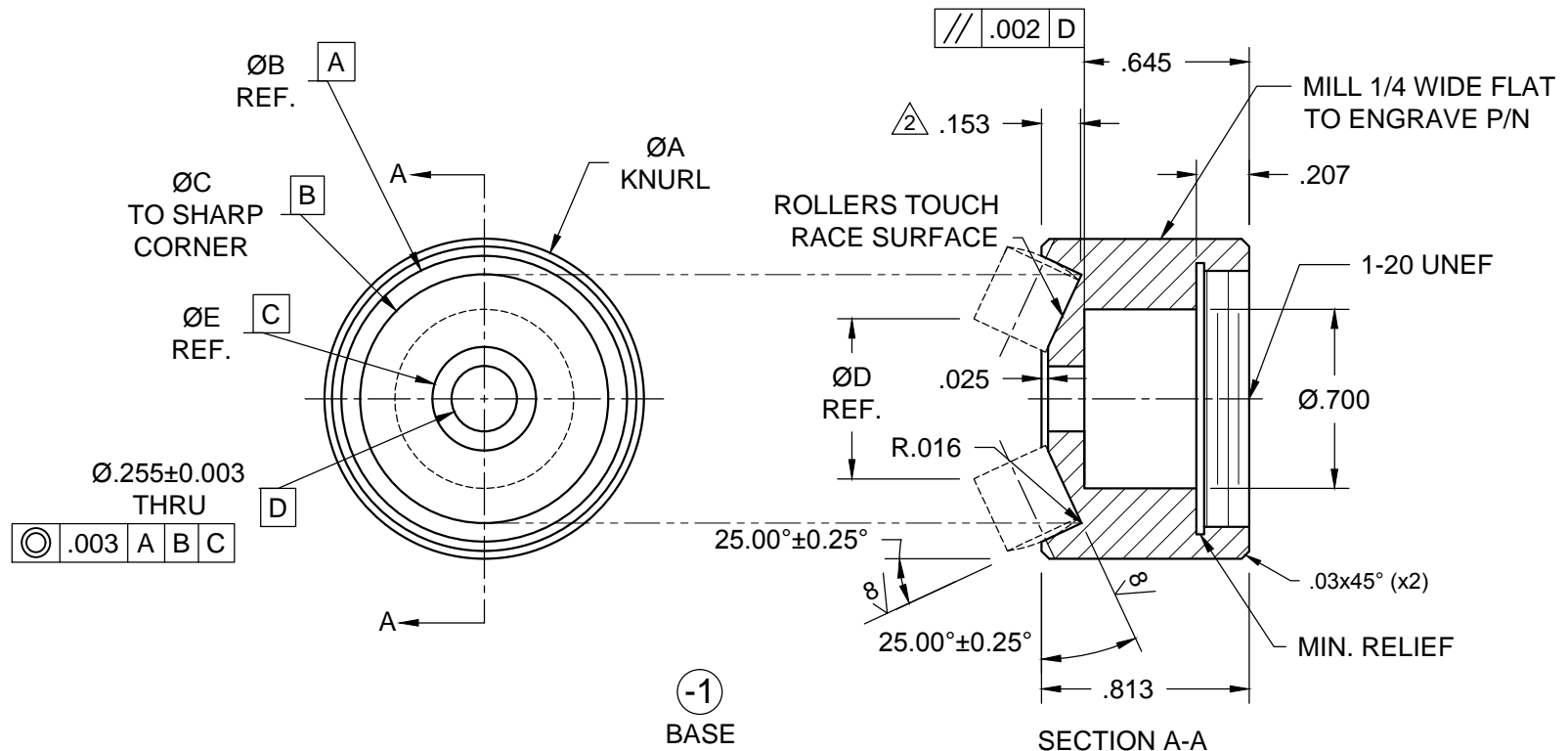
 <b>RED BARN MACHINE</b>			
<b>TITLE</b> KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS			
<b>DWG NO.</b> TOOL#(see chart)-5 ROLLER			<b>REV</b> 2
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1		<b>DRAWN BY:</b> PERRITT <b>APPROVED</b> <b>HEAT TREAT</b> RC 55-60 <b>FINISH SPEC</b> USED ON BEARING <b>SEE CHART</b>	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING		<b>SCALE</b> NTS <b>DATE</b> 3-21-08 <b>SHEET</b> 4 of 9	



- NOTES**
- BREAK ALL SHARP CORNERS (.015/.03).

BEARING # BACB10	TOOL #	ØA +.002 -.002	ØB +.010 -.000	P.D. REF.	MATERIAL
FBO4-AMT	KSTFB04P	1.199	.350	.617	BRONZE RND. BAR Ø1-1/4 x 3/8
FBO6	KSTFB06P	1.372	.438	.775	BRONZE RND. BAR Ø1-1/2 x 3/8
FBO7	KSTFB07P	1.497	.500	.900	BRONZE RND. BAR Ø1-5/8 x 3/8

<b>RED BARN MACHINE</b>	
<b>TITLE</b> KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
<b>DWG NO.</b> TOOL#(see chart)-3 RETAINER	<b>REV</b> 2
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1	
FRACTIONS ± 1/32 ANGLES ± 5°	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
<b>SCALE</b> NTS	<b>DATE</b> 3-21-08
<b>SHEET</b> 3 of 9	



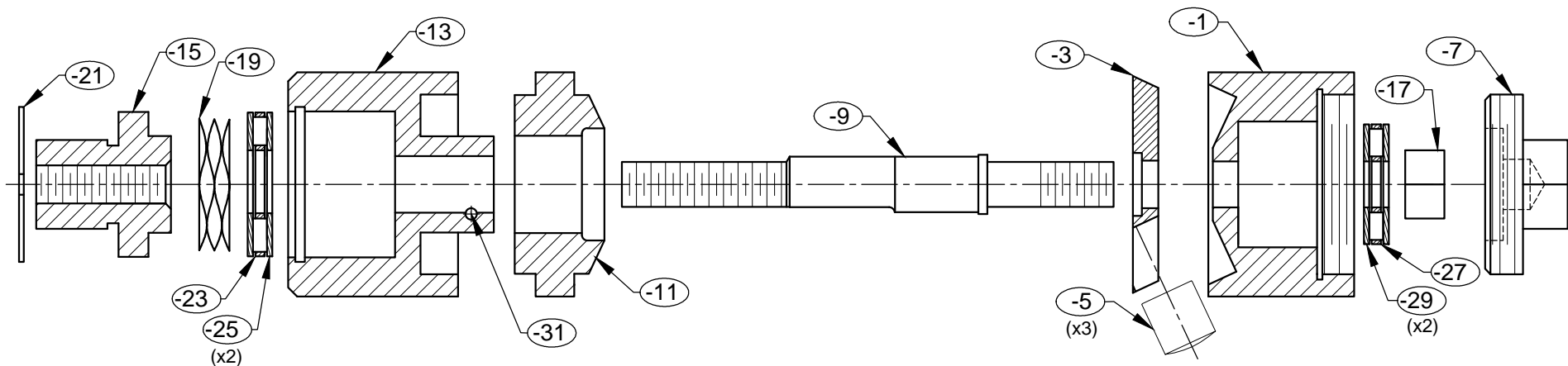
BEARING #	TOOL #	ØA	ØB	ØC	ØD	ØE	MATERIAL
BACB10		+0.010 -0.010	+0.006 -0.002	+0.006 -0.002	P.D. REF.	+0.006 -0.002	
FBO4-AMT	KSTFB04P	1.250	1.109	.963	.617	.397	O-1 DRILL ROD Ø1-1/4 x 1
FBO6	KSTFB06P	1.500	1.267	1.121	.775	.555	O-1 DRILL ROD Ø1-1/2 x 1
FBO7	KSTFB07P	1.500	1.392	1.246	.900	.680	O-1 DRILL ROD Ø1-1/2 x 1

- NOTES**
- BREAK ALL SHARP CORNERS (.015/.03).
  - DIMENSION TO BOTTOM OF R.016=.153; DIMENSION TO SHARP CORNER=.158.
  - RACE SURFACE OF -1 BASE MUST BE SMOOTH AND FREE OF GROOVES & MACHINING MARKS.
  - MUST HOLD ØC POSITION AND ANGLE TOLERANCES TO MAINTAIN PITCH DIA..
  - DO FIRST ARTICLE INSPECTION BEFORE HEAT TREATING.

<b>RED BARN MACHINE</b>	
TITLE KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
DWG NO. TOOL#(see chart)-1 BASE	REV 2
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES	
TOLERANCES ON:	
DECIMALS .XXX ± .005	FRACTIONS ± 1/32
.XX ± .01	ANGLES ± 5°
X ± .1	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	
SCALE NTS	DATE 3/21/08
SHEET 2 of 9	



REVISIONS				
REV	DESCRIPTION	DATE	INITIAL	APPROVED
1	CHANGED -5 ROLLER RADIUS FROM .005 - .010, TO .015 - .020. -3 END MILL DEPTH ENLARGED FROM .329 ±.005 FOR ROLLER CLEARANCE.	7/7/08	WP	DW
2	ADDED FB07P & FB06P TOOLS, SHORTENED 04AMT-9 FROM 2.840 & CHANGED ITS ØE TO A THREAD LENGTH REFERENCE, ALSO ADDED .03x45° TO -1.	10/17/08	WP	



#### NOTES

1. FLAT END OF -5 ROLLERS MUST FACE THE CENTER OF TOOL WHEN ASSEMBLED.
2. TIGHTEN -17 LOCK NUT UNTIL -3 RETAINER HAS .004 CLEARANCE OF -5 ROLLERS. -5 ROLLERS AND -3 RETAINER MUST TURN SMOOTHLY ON -1 BASE WHEN ASSEMBLED.

ASSY QTY	ASSY QTY	B/O	PART #	UNIT QTY	DESCRIPTION	MAT.	B/O INFORMATION OR SPECIFICATIONS	Pg.
			-1	1	BASE		SEE CHART	2
			-3	1	RETAINER		SEE CHART	3
			-5	3	ROLLER		SEE CHART	4
			-7	1	CAP		SEE CHART	5
			-9	1	STUD		SEE CHART	6
			-11	1	DUAL SEAT		SEE CHART	7
			-13	1	RECEIVER		SEE CHART	8
			-15	1	TENSIONER		SEE CHART	9
		B/O	-17	1	DISTORTED THREAD LOCK NUT		1/4-20 UNC x 7/32 Ht. MCMMASTER-CARR #95065A150	1
		B/O	-19	1	CREST TO CREST FLAT WIRE WAVE SPRING	STEEL	.750 OD., .550 ID., WIRE THICK. .013, THREE TURNS SMALLEY RING CO. #CS075-H1	1
		B/O	-21	1	INTERNAL SNAP RING	STEEL	Ø7/8 BORE MCMMASTER-CARR #99142A410	1
		B/O	-23	1	THRUST BEARING (SPRING SIDE)	STEEL	Ø3/8 ID. x 13/16 OD. x 5/64 WIDTH APPLIED (TIMKEN #NTA-613)	1
		B/O	-25	2	BEARING WASHER	STEEL	Ø3/8 ID. x 13/16 OD. x 1/32 WIDTH APPLIED (TIMKEN #TRA-613)	1
		B/O	-27	1	THRUST BEARING	STEEL	Ø1/4 ID. x 11/16 OD. x 5/64 WIDTH APPLIED (TIMKEN #NTA-411)	1
		B/O	-29	2	BEARING WASHER	STEEL	Ø1/4 ID. x 11/16 OD. x 1/32 WIDTH APPLIED (TIMKEN #TRA-411)	1
		B/O	-31	1	ROLL PIN	STEEL	Ø1/16 x 3/8	N/S
ASSY #								

BEARINGS & TOOLS COVERED	
BEARING #	TOOL #
BACB10FB04-AMT	KSTFB04P
BACB10FB06	KSTFB06P
BACB10FB07	KSTFB07P
BACB10	
BACB10	
BACB10	

**RED BARN MACHINE**

TITLE		KSTFB##P SERIES PORTABLE TRI-ROLLER SWAGING TOOLS FOR BACB10FB BEARINGS	
DWG NO.	SEE CHART ABOVE FOR TOOL #		REV 2
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES		DRAWN BY: PERRITT	
TOLERANCES ON:		APPROVED	
DECIMALS .XXX ± .005		HEAT TREAT SEE PART	
FRACTIONS ± 1/32		FINISH SEE PART	
ANGLES ± 5°		USED ON BEARING	
UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R		SEE CHART	
2. DIMENSIONAL LIMITS APPLY AFTER PLATING			
SCALE	NTS	DATE	3/21/08
		SHEET	1 of 9

NOT APPROVED FOR PRODUCTION

 RED BARN MACHINE

NOT APPROVED FOR PRODUCTION

REVISIONS			
REV	DESCRIPTION	DATE	APPROVED

PART #	QTY	DESCRIPTION
-1	1	--

USED ON MODEL ?    	DRAWN BY: PERRITT	<div><div>RB</div>RED BARN MACHINE</div> <div>TITLE</div> <div>TITLE</div>	
	CHECKED		
	HEAT TREAT FINISH SPEC		
	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES ON: DECIMALS .XXX ± .005 .XX ± .01 .X ± .1		
	UNLESS OTHERWISE SPECIFIED 1. BREAK ALL SHARP EDGES .015 x 45° PR .015 R 2. DIMENSIONAL LIMITS APPLY AFTER PLATING	DWG NO. PART #	
SCALE NTS		DATE 1-28-06	SHEET 1 of 1